

CLAIMS

WHAT IS CLAIMED IS:

1. A stent mandrel fixture to support a stent during application of a coating substance to the stent, comprising:

5 a first member to contact a first end of the stent;

a second member to contact a second end of the stent; and

a third member connecting the first member to the second member and extending through a longitudinal bore of the stent, the third member shaped and/or sized to eliminate or substantially prevent a coating from being formed on a luminal surface of the
10 stent.

2. The fixture of claim 1, wherein the third member is cylindrical in shape.

3. The fixture of claim 2, wherein the outer diameter of the third member is about 1.35 mm to about 1.4 mm less than the inner diameter of the stent as positioned on the fixture.

15 4. The fixture of claim 1, wherein the third member has a plurality of spikes.

5. The fixture of claim 4, wherein the plurality of spikes contact the luminal surface of the stent.

6. The fixture of claim 1, wherein the plurality of spikes do not contact the luminal surface of the stent.

20 7. The fixture of claim 1, wherein the cross section of the third member is star shaped.

8. The fixture of claim 1, wherein the cross section of the third member is “+” or “X” shaped.

9. A mandrel to support a stent during application of a coating substance to a stent, comprising: a member to penetrate at least partially into a longitudinal bore of a stent during the application of a coating substance, the member including outward projecting walls, the length of at least one of the walls being not less than 25% of the length of the stent.

10. The mandrel of claim 9, wherein a cross section of at least one of the walls is rectangular in shape.

11. The mandrel of claim 9, wherein a cross section of at least one of the walls is triangular in shape.

12. The mandrel of claim 9, wherein at least one of the walls has a radius of curvature.

13. The mandrel of claim 9, wherein the length of the wall is not less than 50% of the length of the stent.

14. The mandrel of claim 9, wherein the length of the wall is equal to or greater than the length of the stent.

15. A mandrel to support a stent during the application of a coating composition to the stent, comprising a mandrel body capable of being inserted at least partially into a longitudinal bore of a stent and a spiral wall circumscribing the mandrel body.

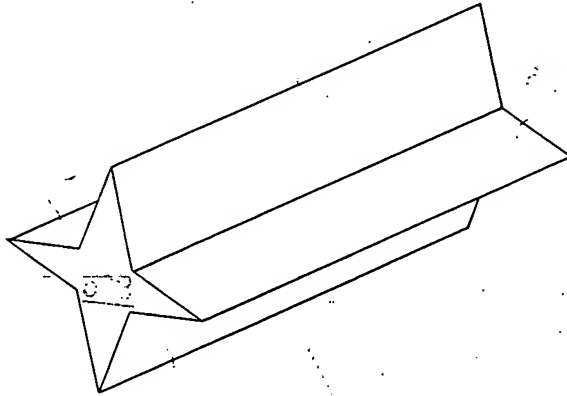
16. A mandrel to support a stent during the application of a coating composition to the stent, comprising a mandrel body capable of being inserted at least partially into a longitudinal bore of a stent, wherein the mandrel body, or a segment thereof, is defined by a shape selected from the group consisting of configuration 2, 3, 4, 5, 6 or 7.

17. A mandrel for supporting a stent during the application of a coating composition to

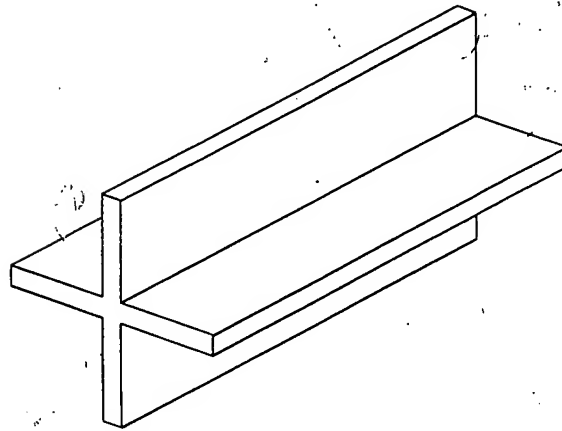
the stent, comprising a mandrel body capable of being inserted at least partially into a longitudinal bore of a stent, wherein at least a segment of the mandrel body is defined by a shape selected from the group consisting of

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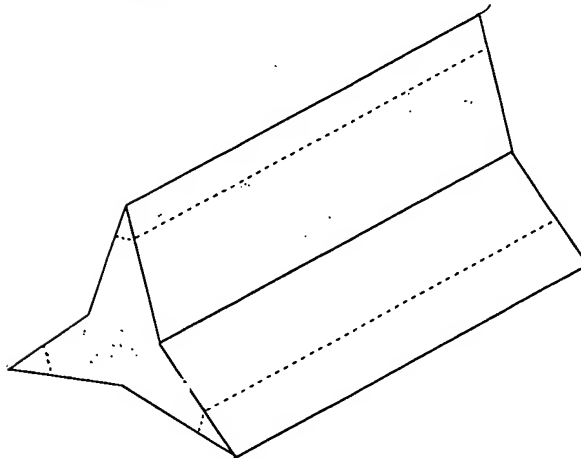
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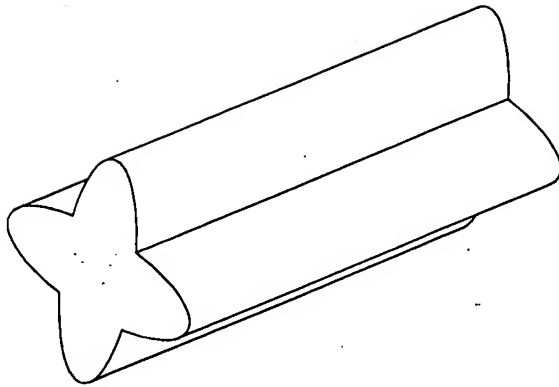
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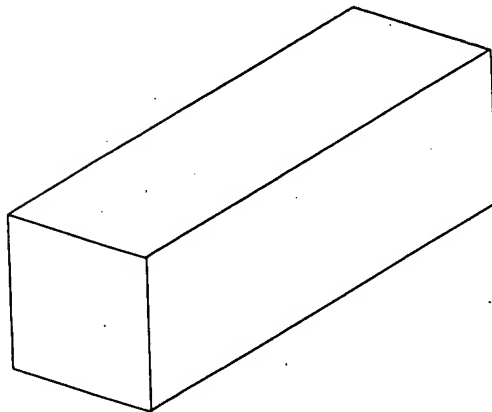
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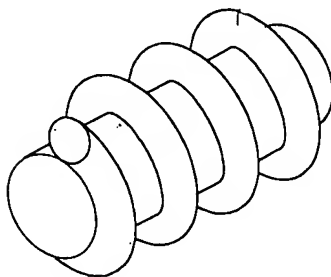
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and

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18. A mandrel to support a stent during application of a coating substance to a stent, comprising: a member to penetrate at least partially into a longitudinal bore of a stent during the application of a coating substance, the member including 3 pairs of opposing parallel sides.

5 19. A mandrel to support a stent during application of a coating substance to a stent, comprising: a member to penetrate at least partially into a longitudinal bore of a stent during the application of a coating substance, the member including 6 non-parallel sides.

20. A mandrel to support a stent during application of a coating substance to a stent, comprising: a core section having at least three sides and a wall extending from each of
10 the sides in an outwardly direction.

21. The mandrel of Claim 20, wherein the walls are triangular in cross section, are square in cross section or have a curved shape.

22. The mandrel of Claim 20, wherein the cross section of the core has a shape of a square, triangle, or rectangle.

15 23. A mandrel to support a stent during application of a coating substance to a stent, comprising: a member to penetrate at least partially into a longitudinal bore of a stent during the application of a coating substance, the member including outwardly projecting walls disposed around the circumference of the mandrel, wherein each of the walls converge with its neighboring wall at an angle.

20 24. A mandrel to support a stent during application of a coating substance to a stent, comprising: a member to penetrate at least partially into a longitudinal bore of a stent during the application of a coating substance, the member including a first end and a second end and at least 3 sides extending between the first and second end, the length of

each side being at least 25% of the length of the stent.

25. The mandrel of claim 24, wherein the length of each side is equal to or greater than the length of the stent.

26. A method of coating a stent with a substance, comprising:

5 supporting a stent on a stent mandrel fixture of claims 1 - 25; and
applying a coating composition to the stent.

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